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Graduates in the Labour Market: Does Socio-economic Background Have an Impact? The Case of Hungary*

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Abstract: This article looks at the status attainment process of young Hungarian graduates, devoting special attention to the impact of social origin, defined as the education and occupation of parents. The authors' estimates show that graduates from high status families enjoy notable advantages in the labour market, even when type of education, field of study, and a range of labour market experience factors are held constant. The greatest wage-premium for coming from a 'good' family is measured for men, occurring four-to-five years after graduation. Patterns of status inheritance are found to be gender-dependent, with women being more influenced by their social background at earlier phases of their careers. The authors argue that the substantial growth in the number of graduates and the increasing variety of jobs they occupy contribute to a social-selection process, moving further up from the educational ladder to the labour market. The authors describe possible mechanisms driving the direct inheritance of social advantages, but further research is needed to explore them in detail.

Keywords: higher education, social mobility, graduates, graduate labour market, post-socialist country

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Introduction and theoretical background: direct and indirect parental effects

The intergenerational transmission of social and economic advantages has long been a focal subject of different disciplines in the social sciences. Particularly

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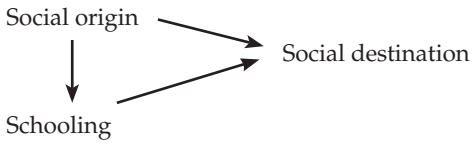
scholars in sociology and in economics have widely studied the persistence of social and economic inequalities and how advantages are inherited from generation to generation. Although departing from different theoretical and methodological standpoints, the overlap in the focus of the two disciplines is noteworthy [Morgan 2006]. Growing inequalities in the labour market and the non-increasing trend of social mobility in industrialised societies have made the issue of social inheritance particularly timely. Scholars in both fields are actively calling for more attention and new insight into the problem [see, e.g., Bowles and Gintis 2002; Goldthorpe and Jackson 2006].

To investigate the mechanisms behind the pure correlation of social origin and social destination, attempts were made to decompose the relationship into its components. The idea of differentiating between the indirect and direct effects of origin appears in sociology and economics [Treiman 1970; Blau and Duncan 1967; Bowles and Gintis 2002]. First, parental social standing has a major impact on educational attainment and influences the later opportunities of offspring in life through the educational channel. Children from families of a higher social standing receive more and better education, and it is for this reason that they obtain better jobs, bigger salaries, and higher social prestige. This is the 'indirect effect' on social background. At the same time, the impact of social origin may operate independently of schooling and result in significant differences in the social destination of individuals with a similar educational attainment but a different social background. This is the 'direct effect' of social origin. Figure 1 shows a simple illustration of this distinction. The notions of 'social origin' and 'social destination' can be replaced with 'parental income' and 'income' – or, indeed, by any other appropriate indicators.

In sociology, where both functionalist and conflict theory argue that education is becoming the main determinant of social success, and empirical evidence seems to support this hypothesis, the idea of the direct transmission of social status has received relatively little attention. Noteworthy exceptions are studies by Breen and Goldthorpe, which systematically challenge the propositions of functionalist theory and even the basic ideas of meritocracy [e.g. Goldthorpe 1985; Breen and Goldthorpe 1999, 2001; Goldthorpe and Jackson 2006]. They present their own empirical results suggesting that the importance of direct parental effects is not declining at all – at least not in contemporary Britain.

Looking at the status attainment process of the 1958 cohort in the National Child Development Study (NCDS), Breen and Goldthorpe [1999] found that parental social class continued to have a significant effect on the social class of the respondents even when education, abilities, and even effort – all the possible components of 'merit' – are controlled for. In another study [Breen and Goldthorpe 2001], they compare the 1958 cohort from the NCDS and the 1970 cohort from the British Cohort Study. The association between class origin and class destination here was found to be largely the same in the two cohorts, with education having a remarkably smaller influence on individuals' relative mobility chances in the

Figure 1. The process of status attainment



younger cohort. This means that by the 1990s there was more room for the effect of_direct channels of social inheritance than there had been a decade before. In an earlier study, Breen [1998] looked at second-level school-leavers from the Republic of Ireland. Decomposing the total impact of social origin into its direct and indirect components, he found that the influence of social origin on the odds of avoiding unemployment is only partially mediated through education.

A recent paper by Evans and his colleagues [Evans et al. 2005] suggests that the direct effects of social origin also exist outside Anglo-Saxon societies. In a comparison of the process of status attainment in thirty-one countries all over the world they found that in twenty of these countries parental background plays a role in shaping occupational status even when respondents' education is controlled for. Parental background in this case is measured by the parents' education, the father's occupation, and the number of books in the parental home. Interestingly, Evans and his colleagues find that the direct effect of a scholarly culture (as measured by the number of books) tends to be stronger in post-communist countries (including Hungary) than elsewhere.

In economics, the role of parental background is discussed in the returns to education literature for two primary reasons. First, estimates derived from the classic Mincerian wage estimation [Mincer 1974] show that education and labour market experience do a relatively poor job of explaining wage variation – they account for only about 25–35% of the total variance [Card 1998]. A large proportion of wage variation between individuals with similar education and other measurable factors (typically age, gender, on the job training) remains unexplained [Rosen 1977]. Such observations have called attention to the possible role of parental background in contributing to wage differences between the similarly educated.

Second, it has been shown that when important determinants of wages are excluded from wage equations, the parameters for schooling are likely to be biased. Depending on the nature of the interrelationship between unobserved variables and schooling, omitted variables may lead to either an under- or overestimation of these measures (see Card [1998] for a comprehensive discussion, and Galasi [2003] for the Hungarian application). Among the (often) unobserved variables, school quality and ability are considered to be of major importance – both are heavily interrelated with parental background. Consequently, family background measures are often applied and interpreted as proxies for school quality [e.g. Grubb 1993] or ability [e.g. Leibowitz 1974].

In wage regressions, when a proxy for parental environment is included, parental background is systematically found to be positively correlated with income when education – but not ability – is controlled for [e.g. Grubb 1993; Ashenfelter and Zimmerman 1997[1]]. However, when ability or even measures of school quality are added to the models, the findings are less conclusive. Several studies found that the existence of a statistically significant, positive direct parental effect varies by gender and/or cohorts studied [Altonji and Thomas 1995[2]; Leibowitz 1974]. In other studies, however, the inclusion of ability-indexes and/or school-quality measures seems to entirely wipe out the parental effect [e.g. Taber 2001].

The case of graduates

In the discussion so far we have not distinguished between different groups or strata in society. Now we will argue that the case of graduates requires special attention when the problems of status-attainment are in focus. We will begin by providing a brief overview of the graduate labour market today and then explain why the characteristics of this market are likely to promote direct social inheritance. Possible mechanisms driving the direct effect of social origin will also be discussed.

It is common knowledge that the number and share of graduates in the populations of most European (and other) countries increased dramatically in recent decades [e.g. Shavit and Blossfeld 1993]. In some countries, the increase in the number of graduates has led to an excess supply, with a rising level of unemployment among graduates and a decrease in the additional benefit from holding a degree. But even where this has not happened, what has is that the number of occupations that traditionally require a higher education degree has not correspondingly increased with the number of potential applicants [Teichler 2000]. Instead, in a number of cases, there has been an upgrading of occupations previously filled by non-graduates [Mason 1996], whereas in other cases graduates are taking jobs for which, strictly speaking, higher education would not usually be necessary. This leads to a radical increase in the heterogeneity of labour market positions filled by graduates, so that graduates are just as likely to hold a lower-level job or be unemployed as they are to pursue a classic or 'high-flying' career. With the growing variety of positions taken by graduates, the heterogeneity of available earnings is also increasing.

In Hungary, the expansion of higher education was held back by the socialist regime and only started after 1989–1990[3]. Having been far below the standard European level for decades, the share of graduates more than doubled between

[1] Cited in Card [1998].
[2] Cited in Card [1998].
[3] In the past the Hungarian system of higher education did not differentiate between BA and MA degrees. This is a recent development. A 'higher education degree' refers to a

1990 and 2000[4]. However, in the 1990s the rapid increase in the labour supply was accompanied by an increasing demand for educated employees, and returns to education in graduate jobs continued to grow until 1998, with graduate unemployment rates remaining far below the national average [Galasi 2004a]. Statistics for more recent years indicate that the privileges associated with a higher education degree have decreased somewhat.[5] Between 1998 and 2002, the wage premium for a higher education degree decreased from 73% to 62%. By 2004 it had become significantly more likely than before [Galasi 2004b] that young graduates had started their careers in what were previously non-graduate occupations (administrative and clerical jobs, intermediate sales and personal services, agriculture and forestry occupations).

Given the supply of graduates in the labour market and the increasing variety of graduate careers, the question arises of how and based on what criteria graduates will be located – or locate themselves – among the various labour market outcomes. Can educational attainment remain an effective signal for the employer, or will other criteria gain room in the selection process? There is evidence that when there is a substantial supply of applicants with a similar type of education employers are more likely to apply selection criteria other than the level of education itself. A range of personality factors start to play a role in the selection process and personal contacts are also more intensively mobilised. Below we argue that these trends are likely to privilege graduates who come from well-educated and high-prestige families.

There is a variety of research evidence suggesting that today cultural resources – cognitive as well as non-cognitive skills – play a significant role in the graduate labour market. In a series of interviews conducted with employers of graduates in Great Britain, Brown and Scase [1994], for example, found that in job interviews questions relating to the applicant's hobbies, greatest achievement in life, sports activities, or travel experiences are becoming more and more important. The ultimate function of such questions is to select people with outstanding generic skills – among which communication and interpersonal skills are of major importance – for well-paid and high-status positions. It is therefore not a set of particular skills or technical knowledge but the person as a whole, a 'personality package', that companies want to buy. Other studies also suggest that, besides formal education, a range of 'soft' factors, such as effort, cognitive abilities, social skills, and personal characteristics, play an important role in personnel recruitment, especially for managerial jobs, but even for jobs in sales and person-

degree earned from an institute of tertiary education, typically after four or five years of study. The typical age at graduation used to be twenty-three, although it is currently increasing.

[4] Growing from 25 822 to 57 056 between 1990 and 2000 [Fazekas and Varga 2005].

[5] For example, among graduates aged 20–29 years old, 3% of those with a college degree were unemployed in 2000, but 4% in 2002, while the related ratios are 3% and 7% for university graduates [Róbert 2004].

al services. Jackson and her colleagues [Jackson, Goldthorpe and Mills 2005], for example, looked at job advertisements in British local and national newspapers and found that references to the preferred personality factors often appear next to the very general requirement of holding a higher education degree.

An international graduate survey conducted in 1999 suggests that such findings can be generalised to other countries. In five out of eleven countries, 'personality' was selected by graduates as the most important factor in getting their first job after graduation, and it was rated highly in other countries, too. The proportion of those who considered personality a very important or an important factor ranged between 57% and 84% [Blaskó 2002a].

Like the authors mentioned above, we suggest that the desired personality factors for high prestige labour market positions are not independent of social background. Instead, they reflect middle-class values and attitudes and correlate with cultural capital, so that they are inherited in families in the higher social strata.

In addition to cultural factors, social (or network) capital is again likely to improve the labour market prospects of graduates with a good social background. Since employers claim that one of the most effective ways of filling well-paid positions is through employer referral [e.g. Kugler 1997], it is not surprising that social networks are widely used in the graduate labour market. Furthermore, in a situation of intense supply in the labour market, it is becoming increasingly efficient for employers to reduce searching costs by drawing on personal contacts or employee referrals [Rosenbaum et al. 1990], thus making social (or network) capital even more valuable. Empirical evidence does support the idea that personal contacts play an important role in finding a (good) job in the graduate labour market. In the 1999 European graduate survey cited above, 15% to 54% of the graduates in the participating countries claimed that they had found their first job via personal network [Brennan et al. 2001]. In a recent employer survey in Hungary, informal routes – such as utilising personal or costumer contacts – were mentioned as some of the most important search methods by graduate employers in all investigated sectors [*Diploma* 2006]. In such an environment, potential employees from higher status families can benefit either directly from the social network of their parents or from networking skills acquired at home [e.g. Lam and Schoeni 1993].

Financial resources are likely to contribute to the success of graduates in the labour market as much as they promote the success of other groups of employees. They also strengthen the link between social origin and destination in similar ways they do this for others. Hauser and Daymont [1977] argue that a better financial standing may lead to better options because it affords a person with time to search or wait for a good job. They suggest that higher income in the childhood family leads to higher income expectations, and finally they also refer to the classic manner of wealth inheritance. Hungarian examples come from some sporadic interviews we carried out with graduates, where we found that parental support allowed time for extra-curricular activities (such as a long journey abroad), which in turn helped the graduate to further improve the skills and knowledge that are

highly valued by employers. In some professions (e.g. law, medicine), graduates spend several years in poorly paid or even fee-paying training programmes after finishing university. Finally, starting up one's own business with the financial help of the parents is also a choice.

Empirical findings from research focusing on the status attainment of graduates are not fully conclusive in determining the relationship between origin and destination. An early study in the field [Hout 1988] showed that in a highly select group of American university graduates all the interaction between social origin and destination had disappeared. Conversely, several more recent studies in Great Britain found at least some additional premia for having a diploma among graduates from better-off families [see, e.g., Smith, McKnight and Naylor 2000; Naylor, Smith and McKnight 2002; Blaskó 2002b]. In Hungary, no focused research of this kind has yet been carried out. However, general social mobility studies have shown an increasing level of social reproduction in the higher strata of society – especially among the younger generations [see Bukodi 2002; Róbert and Bukodi 2004]. No information, however, is available on the share of direct and indirect factors determining these trends.

Data, design, and variables

In the following sections we will first introduce the data set used in our analysis and then describe the indicators that were applied. We will look at the social and economic success of young Hungarian graduates at two early stages in their career and relate their position to their social origin – keeping a set of educational and labour market characteristics constant. This way, we hope to tell whether status reproduction in Hungary is only taking place in the education system, or whether other mechanisms also influence this process. The measures of 'success' we selected are based on the economic as well as the sociological tradition, and parallel models are also introduced, one of which contains a social prestige scale as the dependent variable and the other monthly net earnings. To these models we add a third set of (logistic) models estimating the odds of being unemployed for any short period of time in the first four years after graduation. In the end of this section, the issue of selectivity in these data will also be considered.

Data[6]

For the purposes of this analysis, we used a panel data set on the educational and labour market experiences of Hungarian graduates. The first wave of the survey was conducted on a cohort that graduated from full-time tertiary education in 1999 and it was administered one year after their graduation, in Septem-

[6] Data collection was commissioned by the National Institute for Lifelong Learning (Nemzeti Felnőttképzési Intézet)

ber 2000. The second wave was completed in February 2004. In the first wave, questionnaires were sent out by post to every member of the target population. In the second one, respondents who provided a phone number were contacted over the phone. In 2000, 22% of the questionnaires were returned, resulting in a total sample of 5808. Out of this population, 2242 respondents were successfully interviewed in the second wave, and non-response to key questions in the survey reduced the sample somewhat further. The sample clearly suffered from the problem of non-response, to which we will return later.

Because information on parental education and occupation is only available for those who participated in the second survey, we used this smaller subsample throughout our analyses. For the purpose of our final models, we selected only those who had said their main activity was work at the time of the survey. In 2000 there were 1680 graduates working, and in 2004 there were 1791. Owing to non-responses to questions relating to wage and occupation, and the limited availability of information on institutional quality, the case number was further reduced in the various models.

Economic and social destinations

Economic and social destination will first be measured by the (natural logarithm of) net monthly wage and by the (natural logarithm of) occupational prestige scores (SIOPS) of the respondent, respectively. In this way we aim to differentiate between two somewhat different rewards in the labour market: financial credits on the one hand and social credentials on the other. The wage level is the classic measure of labour market potential in the related economic literature, but it is rarely included in social mobility analyses. Having concerns about the reliability of our data on working time, we decided to include net monthly wages in September 2000 and February 2004 in our estimations.

The Standard Occupational Prestige Score (SIOPS) was originally designed by D. Treiman [1977] and is a commonly used indicator of social position in social mobility studies. In our models, the updated 1996 version of the scale was used [Ganzeboom and Treiman 1996]. The SIOPS is based on a highly standardised, internationally used ranking of occupations taken from ISCO (International Standard Classification of Occupations) according to their subjectively perceived prestige. Theory suggests that the social prestige of occupations reflects differentials in control over scarce but desirable resources, including knowledge, skills, property, and also power and privileges. This way, social prestige is expected to reflect a wide range of differentials linked to occupations and is widely used as a complex indicator of social status. International comparisons suggest a surprisingly high level of correlation between SIOPS in different countries [e.g. Treiman 1977]. To make interpretation easier and the parameters comparable, we use the natural logarithm of SIOPS as the outcome variable.

A third possible measure of labour market success is the occurrence [a 0-1 distinction indicating whether someone has been unemployed for a while (1) or not (0)] of unemployment. Despite the generally low level of graduate unemployment in Hungary, we found that nearly 18% of this new and young cohort of graduates experienced unemployment between September 1999 and January 2004, with the median number of months spent out of work being six. Experience of unemployment was measured using a binary variable indicating whether the respondent had any experience of unemployment after graduation.

Independent variables

The family background of respondents was proxied by four variables: the highest level of education of the mother (1) and the father (2) and the occupational prestige (SIOPS) of the mother (3) and the father (4). All the information relates to the time when the respondent was fourteen years old.

We reduced the parents' education indicators to two dummies which differentiate between mothers with or without a higher education degree, and fathers with or without a degree. About 27% of our graduates reported having a mother and 34% a father with a higher education degree. Although it is not the aim of this study to uncover the mechanisms that underlie the transmission of family background, the relevant literature gives guidance about the possibilities. Generally, the education of the parents is assumed to affect human (or cultural) resources by influencing the quality and quantity of time spent with the children [Bourdieu 1973; Leibowitz 1974]. The stock of a person's cultural assets (e.g. how many books they have, what musical instruments they own, etc.), reading habits, and the frequency of cultural activities such as visits to museums, theatres, etc., in the parental family have also been shown to relate to the parents' education and to influence the educational and occupational outcomes of the offspring [e.g. Róbert 1991; Blaskó 2003; Evans et al. 2005]. The parents' education is therefore used in this analysis as the primary proxy for cultural resources other than the education provided to the child.

The parents' and especially the father's occupations are more closely linked to the financial circumstances of the family. Still, the SIOPS of the parents in our study does not merely serve as a proxy for income and wealth but also as a proxy of labour market potentials in a more general sense. By representing social prestige as well as the availability of various social resources, we expect the parents' occupation to be linked to network resources as well. As indicators for the parents' occupational prestige, two dummies constructed from the SIOPS were applied. These dummies differentiate between mothers (and fathers) inside and outside the upper quartile of the range of the mothers' (and the fathers') SIOPS in our sample. Control variables added to the models are displayed in Table 1.

This way, we will build a total of 2x2x2 = 8 linear models and 2 logistic re-

Table 1. Control variables in the models estimated

Name of variable	Description	Coding	Comment
Application ratio	Proxy for institutional quality. Measured as the ratio of the total number of applicants to the number of successful applicants in the higher education institution for the particular field of study they covered. The higher this ratio, the higher the quality of the institution is considered to be.	Continuous	
Type of institution	Type of higher education institution.	1=University 0=College	
Field of study	Field of study: agriculture, foreign language, teacher training, sports, IT, engineering, medicine, law, economics+business, social sciences, natural sciences	Reference category: arts and humanities	
Financing	Studies not fully financed by the state for any reason	1=not fully financed by the state; 0=state-financed	
Work experience	In-school labour-market experience	1=worked regularly while in tertiary education; 0= did not work	
Unemployment ratio	Micro-regional unemployment rates in 2000 and 2002	Continuous	
Place of work	Working in Budapest	1=working in Budapest; 0=working elsewhere	
Further study	Type of formal education completed after graduation: separate dummies for: university, college, PhD, other higher education institution, any other type of further study	1=studied; 0=did not study	Not included in the 2000 models.
Unemployment experience	(Lack of) labour market experience: whether the respondent had spent any time unemployed between graduation in 1999 and January 2004	1=was unemployed; 0=was not unemployed	Not included in the 2000 models and the unemployment estimations
Time spent not working	Whether the respondent spent any time not working for any reason, other than studying or being unemployed	1=spent time not working; 0=did not spend time not working	Not included in the 2000 models

gression models. First, a set of linear models will be estimated: one with a measure of social prestige as the dependent variable and another one with monthly net earnings as the dependent variable. Both sets will be produced for both waves of the survey, and for men and women separately. Then two logistic regression models will be added to the binary outcome, whether the respondent spent any time unemployed between September 1999 and January 2004. Here again, separate models for men and women will be estimated.

In the following section, the problems of selectivity and endogeneity will be considered and – where possible – dealt with.

Selectivity and endogeneity in the data

Potentially the most serious source of bias is the low rate of return in the first wave of this survey and the high attrition rate in the second one. It is estimated that in 1999 around 27 000 graduates left the higher education system in Hungary. The return rate was 22% in the first wave, resulting in a sample size of 5808. This number was then further reduced in the second wave, when only 2242 respondents, the ones who willingly provided a phone number in the first survey (and still valid four years later), could be contacted. Although definitely low, such levels of response rate are not unusual for social surveys of this kind. In any case, we found that the size of the resulting sample was sufficient for performing the type of analyses presented here. However, since the distribution by the type of higher education institutions in the sample was different from that in the overall population, we applied analytical weights in the study. The aim of weighting was to reproduce in the sample the proportion of students that graduated from the various higher education institutions in 1999. In this way, distribution by type of institution, by region of higher education, and by field of study was adequately adjusted to the relevant distribution in the entire population.

Although we could not control for selectivity in the first wave, we examined the possibility that the more successful individuals – i.e. those with a more stable labour market position, better career prospects, and higher wages – were more willing to provide their phone numbers for a second survey. If this is true, we are missing out on input from those who are less successful, and we can therefore expect the key parameters of the social background variables to be underestimated in our models. Unfortunately, a fully satisfactory control of the selection process is not possible based on the data at hand, because the key measures of the individuals' social background were only included in the second survey, where the number of respondents had already been reduced. The possibilities open to us are therefore limited. Below we will compare the 'responding' and the 'non-responding' sub-groups in our sample along the key schooling and labour market indicators. Then we will attempt to draw some conclusions regarding the possible biases that necessarily remain in our estimates.

The similarity of the 'first-wave-only' and the 'both-waves' sub-samples could only be tested on the attributes included in the first survey. The distributions and the means of the two sub-samples by gender, labour market position at the time of the first survey, field of study, type of higher education, occurrence of work while at higher education, and satisfaction with work in 2000[7] suggest that selectivity is gender dependent. First, men were somewhat more likely to respond to the second survey than women – with 48% of men and 45% of the women in the original sample participating in the 2004 sample.[8] The characteristics of the women who responded to the second survey do not significantly differ from those who participated in the second wave only (including labour market status in September 2000, field of study, type of higher education institution, work experience, and wages and social prestige in 2000). Among men, however, those included in both samples show some distinct features. They were more likely to be in the labour force in September 2000 (either working or as unemployed) and less likely to be studying than the others. Besides, those who were studying did so at a college rather than a university. Agriculture students and those who did not work during their higher education studies were overrepresented in the second set. Even though the men who responded to both surveys appeared to be earning less in 2000 than the others, further investigation revealed that this difference is largely attributable to college graduates being overrepresented in the second group.

To assess the joint effect of the key variables on response in the second wave, we estimated simple binary models with the variables mentioned above on the right-hand side. Results from probit estimation show that in the case of men the type of institution has a significant effect on the participation in the second wave. University graduates are less likely to participate than college graduates. Interestingly, those who were already working at the time of their tertiary studies were less likely to participate than others. Among women, social science graduates are more willing to participate than others – an understandable finding that likely reflects their interest in, and empathy for, social science research. Finally, agriculture graduates seem to be slightly overrepresented in the 'both waves' group.

In general, our estimations suggest no marked selectivity along the indicators applied in this study. Pseudo R^2 is only slightly above 1% in the model for men and is even lower in the estimation for women. This suggests that selectivity on observable characteristics in the second survey is not especially a problem in these data.

Another driver of selectivity is the unobservable 'labour market success'. This is the case of classical self-selection into employment, and thus the usual argument applies: we can expect our estimated coefficients to be biased because of the systematic differences in wage offers and observed wages between those who work and those who choose not to. However, to correct such an effect we

[7] For statistics in this section see Blaskó and Róbert [2007].

[8] Compared to the entire population of graduates in 1999, women still remain overrepresented in this sample. This is due to their higher response rate in the first survey.

would need to find a suitable instrument that correlates with participation and does not correlate with wage – a criterion that none of our variables in the data set seems to meet. We must consequently hope that the biases due to selectivity are not too severe here. This hope is supported by the relatively low percentage of unemployed and inactive in the sample (6.4% and 5.2% respectively in 2000, and 2.7% and 13.9% in 2004 – excluding full-time students).

The economic literature on returns to education discusses in detail how the unobserved characteristics of individuals (such as family background, school quality, and ability) can lead to biases when return to schooling is estimated by OLS. The direction of this bias depends on the nature of the relationship between the variables omitted on the one hand and the level of schooling on the other [e.g. Galasi 2003]. In the case at hand it is the parameters of the family background measures that may suffer owing to the endogeneity of school quality and ability. This problem is partly handled by applying proxies in the analysis. To assess the impact of school quality, we estimate the premia for a university (as opposed to a college) degree, and for certain fields of studies. Furthermore, the ratio of the total number of applicants to successful applicants to an institution and field of study combination (i.e. a particular field in a particular institute) is applied as a proxy for institutional heterogeneity. It is assumed that in the environment of an increasing labour supply, employers use information on institutional heterogeneity as an additional screening device.

When modelling choice of schooling, we may believe that family background, as well as individual ability, is an important determinant of the type of higher education. Because of this, there is a correlation between individual ability and schooling choice, which is conditional on family background. To isolate the effect of family background on wages, we have to rid it of individual ability effects. This could be achieved by including a good proxy for ability in the regression (such as appropriate test scores), but such scores are unfortunately not available in these data[9].

Models, analyses, and findings

Table 2 displays the final linear regression models for men and women respectively. In both cases, four models are shown. Two have (log) wages and (log) SIOPS as outcome, two relate to 2000, and another two to 2004. Table 3, in turn, presents odds ratios and *z* values from the logistic regression models on the odds of unemployment.

Our estimates indicate that key factors associated with early success in the labour market are the type of higher education institution (with university degrees providing better opportunities than college degrees) and the field of study

[9] Although one could consider data on the application ratio – our proxy for institutional heterogeneity – to incorporate some aspects of individual ability as well.

Table 2. Coefficients from OLS estimations (t-values in parentheses)

	Men				Women			
	Log earnings, 2000	Log SIOPS, 2000	Log earnings, 2004	Log SIOPS, 2004	Log earnings, 2000	Log SIOPS, 2000	Log earnings, 2004	Log SIOPS, 2004
High prestige father	0.029	0.000	0.116	–0.013	–0.059	–0.003	–0.058	0.001
	(0.41)	(0.02)	(2.09)**	(0.79)	(1.46)	(0.17)	(1.51)	(0.05)
High prestige mother	–0.015	0.012	–0.013	0.017	0.016	–0.003	–0.016	0.007
	(0.19)	(0.48)	(0.20)	(0.86)	(0.39)	(0.14)	(0.39)	(0.38)
Father: higher education	–0.105	0.027	–0.061	0.039	0.093	0.019	0.057	–0.011
	(1.48)	(1.13)	(1.07)	(2.17)**	(2.26)**	(1.09)	(1.46)	(0.61)
Mother: higher education	–0.044	–0.033	–0.074	–0.027	–0.014	0.036	0.028	–0.005
	(0.59)	(1.35)	(1.14)	(1.37)	(0.32)	(1.92)*	(0.70)	(0.24)
Application ratio	0.010	–0.001	0.005	0.001	0.001	0.004	–0.002	0.007
	(0.69)	(0.22)	(0.41)	(0.18)	(0.15)	(1.41)	(0.26)	(2.58)**
University	0.181	0.033	0.180	0.024	0.162	0.055	0.104	0.054
	(3.11)***	(1.66) *	(3.58)***	(1.51)	(4.79)***	(3.73)***	(3.09)***	(3.39)***
Self–financed studies	0.012	0.034	–0.046	0.027	–0.084	0.005	–0.061	0.012
	(0.16)	(1.39)	(0.73)	(1.33)	(2.26)**	(0.28)	(1.60)	(0.67)
Working in Budapest	0.105	0.048	0.101	0.013	0.130	–0.007	0.135	–0.011
	(1.88)*	(2.52)**	(2.14)**	(0.86)	(3.88)***	(0.47)	(4.22)***	(0.72)
Agriculture	0.315	–0.073	0.197	–0.087	0.272	–0.138	0.310	–0.083
	(2.36)**	(1.65)*	(1.89)*	(2.70)***	(4.38)***	(5.14)***	(5.06)***	(2.96)***
Foreign language	0.205	0.045	0.255	0.025	0.103	–0.065	–0.012	–0.052
	(0.98)	(0.68)	(1.29)	(0.39)	(1.78)*	(2.57)**	(0.21)	(2.00)**

Teacher training	–0.069	0.026	0.138	0.036	–0.008	–0.017	0.002	–0.044
	(0.33)	(0.37)	(0.81)	(0.68)	(0.15)	(0.78)	(0.04)	(1.87)*
Sports	–0.070	0.020	0.006	0.063	–0.304	–0.041	–0.019	–0.105
	(0.24)	(0.20)	(0.02)	(0.89)	(1.29)	(0.40)	(0.10)	(1.18)
Informatics (IT)	0.570	–0.001	0.262	–0.037	0.613	–0.000	0.347	–0.086
	(3.95)***	(0.03)	(2.22)**	(1.00)	(6.15)***	(0.01)	(3.54)***	(1.78)*
Engineering	0.437	0.069	0.289	–0.015	0.318	0.002	0.156	–0.047
	(3.70)***	(1.79)	(2.98)***	(0.51)	(5.11)***	(0.06)	(2.50)**	(1.55)
Medicine	–0.059	0.204	0.324	0.209	0.016	0.075	0.063	0.166
	(0.39)	(3.99)***	(2.49)**	(5.13)***	(0.26)	(2.87)***	(1.05)	(5.89)***
Law	0.303	0.079	0.255	0.135	0.067	–0.063	0.236	–0.098
	(1.90)*	(1.49)	(1.82)	(3.07)***	(0.90)	(1.97)**	(3.05)***	(2.75)***
Economics / business studies	0.675	–0.037	0.388	–0.034	0.582	–0.067	0.505	–0.071
	(5.50)***	(0.91)	(3.84)***	(1.10)	(11.52)***	(3.09)***	(10.26)***	(3.09)***
Social sciences	–0.120	–0.050	0.112	–0.055	0.135	–0.035	0.083	–0.071
	(0.45)	(0.56)	(0.47)	(0.71)	(1.64)	(0.99)	(0.97)	(1.76)*
Natural sciences	0.028	0.024	–0.056	0.042	–0.027	0.023	0.146	0.020
	(0.19)	(0.46)	(0.49)	(1.16)	(0.40)	(0.77)	(2.43)**	(0.71)
Work experience	0.137	–0.018	0.000	0.021	0.116	–0.008	0.059	0.005
	(2.50)**	(0.94)	(0.00)	(1.38)	(3.59)***	(0.61)	(1.83)*	(0.35)
Regional unemployment ratio 2000	–0.445	–0.074			–1.341	0.234		
	(0.56)	(0.27)			(3.22)***	(1.28)		
Regional unemployment ratio 2002			–0.346	0.112			0.138	0.063
			(0.52)	(0.54)			(0.32)	(0.32)

Table 2 (cont'd) Coefficients from OLS estimations (t-values in parentheses)

	Men				Women			
	Log earnings, 2000	Log SIOPS, 2000	Log earnings, 2004	Log SIOPS, 2004	Log earnings, 2000	Log SIOPS, 2000	Log earnings, 2004	Log SIOPS, 2004
Further study – University			–0.049	0.041			0.038	0.015
			(0.86)	(2.27)**			(1.13)	(0.99)
Further study – College			0.025	0.025			0.055	–0.003
			(0.45)	(1.41)			(1.45)	(0.15)
Further study – PhD			–0.071	0.027			–0.114	0.145
			(0.52)	(0.62)			(1.12)	(2.96)***
Further study – other higher education			–0.019	0.046			–0.086	–0.043
			(0.17)	(1.32)			(1.45)	(1.57)
Further study – outside the higher education			–0.046	–0.036			–0.032	–0.007
			(0.96)	(2.38)**			(0.94)	(0.47)
Unemployment experience			–0.103	0.004			–0.126	–0.062
			(1.79)*	(0.19)			(3.33)***	(3.47)***
Not employed for a while			0.087	–0.000			–0.055	–0.026
			(1.15)	(0.01)			(1.51)	(1.51)
Constant	10.587	3.975	11.372	3.950	10.580	3.973	11.261	4.004
	(70.80)***	(79.70)***	(90.97)***	(102.88)***	(178.78)***	(156.68)***	(188.23)***	(143.94)***
Observations	410	410	436	474	702	712	621	656
R–squared	0.23	0.17	0.18	0.24	0.40	0.14	0.32	0.24

Absolute value of t statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3. Logistic regression on risk of unemployment between graduation and January 2004. Odds ratios (Robust *z* statistics in parentheses)

	Men	Women
High prestige father	0.599 (1.50)	0.721 (1.24)
High prestige mother	0.743 (0.75)	0.598 (1.66)*
Father: higher education	0.803 (0.63)	1.082 (0.30)
Mother: higher education	1.234 (0.51)	1.450 (1.17)
Application ratio	0.898 (1.17)	0.99 (0.13)
University	0.779 (0.81)	0.742 (1.18)
Self-financed studies	1.818 (1.80)*	0.949 (0.18)
Agriculture	0.948 (0.10)	1.498 (1.18)
Foreign language	0.252 (1.15)	0.479 (1.84)*
Teacher training	1.677 (0.72)	0.655 (1.29)
Sports	0.477 (0.65)	1.494 (0.34)
Informatics (IT)	0.143 (2.73)***	0.906 (0.12)
Engineering	0.361 (1.98)**	0.345 (2.19)**
Medicine	0.101 (2.12)**	0.044 (3.03)***
Law	0.231 (2.40)**	0.428 (1.57)
Economics / business studies	0.590 (0.59)	0.563 (1.67)*
Natural Sciences	1.018 (0.03)	0.397 (2.03)**
Work experience	0.356 (2.87)***	0.640 (1.71)*
Regional unemployment ratio 2002	6.934 (0.50)	3.379 (0.46)
Further study – university	0.668 (1.23)	0.960 (0.16)
Further study – college	0.442 (2.29)**	1.310 (1.05)
Further study – PhD	0.234 (1.42)	0.616 (0.51)
Further study – other higher education	0.606 (0.62)	1.040 (0.08)
Further study – not in higher education	0.919 (0.30)	1.832 (2.77)***
Not employed for a while	0.557 (0.83)	0.701 (1.59)
Observations	519	892

Robust *z* statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

(with some outstanding areas such as information technology, engineering, medicine, business, and economics). Further advantages can be achieved through work experience. In addition, those who find jobs in Budapest also seem to be better off than others. We found that institutional heterogeneity – as measured by the application ratio – only affects the social prestige of women five years after graduation. Consequently, institutional differences do not appear to serve as a significant screening device in the graduate labour market.

To these main determinants of a graduate's employment outcome must be added family background, although it operates at varying degrees, in different ways, and in various circumstances. Among men in a very early stage of their graduate career, neither the social prestige of their job nor their wage is influenced directly by parental background. Three and a half years later, however, the social standing of the parents begins to have a statistically significant effect on both of them (at the 0.05 level). By that time, those whose fathers rank in the top quartile of the occupational prestige scale earn 12% more than their counterparts, while men whose fathers also completed higher education enjoy 4% more social prestige than others. The likelihood of socially advantaged men becoming unemployed during these early years is not significantly lower than the average.

The parameters in the case of women show a different pattern than in the case of men, confirming our decision to estimate separate models for each genders. Remarkably, social background variables behave differently here, although they indicate important similarities, too. Most notably, the timing of parental impact shows an opposite picture here, with the wage and social prestige of graduates being influenced by social origin in 2000 but not later. In 2000, advantages associated with a good social background included a 9% wage premium (associated with a graduate father) and 4% higher social prestige (associated with a graduate mother). By 2004 however, all direct parental impact are diminishing. Instead, we found that graduate women with a high prestige mother are 40% less likely to be unemployed during the first years of their careers than those from less advantageous social backgrounds. (Table 3)

Discussion

In this analysis, we focused on the early stages of a graduate's career. Graduates' jobs 15-16 months after graduation (September 2000) tend to be their first jobs after completing their degrees (76% of the cases in this sample). Even the 2004 data provide us with still a rather early view of their life course. It is difficult to tell whether the parental impact detected at this time would be smaller or greater than what we would measure at a later time. A related question is how the different findings from the 2000 and 2004 models can be interpreted.

Social mobility studies usually assume that a graduate's earlier jobs are more strongly influenced by parental background than later jobs. This is not nec-

essarily true for the very first jobs though. It is expected that in the early phases of a graduate's career, there are more arbitrary determinants behind what jobs they take, and the job-person match usually improves during the process of intragenerational mobility [Mayer and Carroll 1987]. These tendencies are likely to strengthen owing to recent changes in the school-to-work transition process, as nowadays school leaving is followed by a longer searching phase, during which a graduate typically holds a series of unstable jobs with fixed-term contracts [Müller and Gangl 2003]. In this sense, early snapshots of a graduate's career provide a somewhat arbitrary picture, which is not yet 'mature' enough in the sense of its providing a reliable reflection of the graduate's preferences, capabilities, and long-term career prospects. Consequently, we should expect that the effect of social background would change and increase over time as a graduate ages and see a status-correction, whereby the individuals social position is adjusted to match their social background [e.g. Breen and Goldthorpe 2001].

However, the ageing effect cannot be identified separately from cohort effects here. As mentioned above, the graduate labour market has changed radically over the past fifteen years in Hungary. A dramatic increase in the supply of graduates was met by an equal demand until around 2000–2002, but less so after that. With the number of applicants growing, one would expect employers to make more extensive use of alternative selection criteria, some of which could reflect social background, which would then lead to an increase in direct parental effects. By the time of the second data collection in 2004, these tendencies started showing up in the labour market, and – according to our hypothesis – they could result in an increase in the direct impact of social background.

It is impossible using the available data to disentangle the potential effects. To do so we would need different cohorts observed over time. The difference between our two observations is not only that the individuals are older, but also that they are operating in a potentially very different economic environment. Given that the two processes (i.e. the aging effect and the passage of historical time) are inseparable, we can never be quite sure what causes the changes we see. All in all, the increasing tendency for parental background to have an impact on wages, as well as on social prestige, in the case of men seems to be in line with both the aging effect and the cohort effect described. Further research is needed to find out whether the strength of this effect will increase as graduate men move on in their career or stabilise on the 2004 level.

However, what we found in the case of women – significant parental impact in 2000 only – does not justify these expectations. A possible explanation is that it is the gender-specific nature of the early working career that overrides the general ageing and cohort effects. After finishing higher education, women are more likely to feel the pressure to make a quick and efficient career-start before leaving work, for a shorter or longer period, to become mothers. On the basis of recent demographic trends in Hungary, around 10% of women with a higher education degree may be expected to give birth before turning twenty-five and with a fur-

ther 40% doing so before their thirtieth birthday.[10] By 2004, 5% of the women in our sample working at the time of the second survey had already had some break in their career. The length of this break was more than two years on average. Furthermore, over 20% of the women working in 2000 were on maternity leave in 2004, and therefore they were missing from our second set of models. Expecting an early break in their career, women are possibly less affected by the tendency for career starts to be flexible and make more of an effort to find the right position as soon as they can. These substantial deviations from the classic career route of steady adjustments and upward movements, along with the large number of women missing from the second sample of working graduates, may explain why there was no sign of the expected ageing effect in the case of women.

Turning now to the issue of the source of parental impact, there are other important gender characteristics in the social reproduction process that can be explored. In support of earlier research findings that the mother's characteristics are more important in shaping their daughters' careers and the fathers have more of an impact on their sons' status attainment [e.g. Aschaffenburg 1995], we also found that mothers play a greater role in the case of women. In particular, our models show that it is the highest level of education of the women's mothers that influences women's social prestige, while their risk of unemployment is a factor of their mothers' social prestige. Out of the three success measures investigated, it is only women's earnings that seem to be influenced more by their fathers' characteristics. On the other hand, in the case of men, both wage and social prestige score are factors of the fathers' characteristics – a finding that is very likely to reflect the gendered nature of socialisation in the family and the gendered nature of the occupational structure.

Out of the indicators for social background applied in this study, parents' education is more closely linked to the cultural atmosphere of the family. Therefore, we could risk the conclusion that the significant parameters associated with either parent's higher education degree suggest cultural ways of transmitting inequalities are present. As explained earlier, parents' occupational status is generally assumed to be linked to the financial situation of the family, but also to its general social standing, social network, and power.

From this it follows that, with both earnings and the occupational prestige score of women being factors of either parent's education, it is mostly through socially inherited abilities, skills, attitudes, and behaviour that family background affects the quality of jobs taken by graduate women. In other words, it is the cultural inheritance that a woman can mobilise to get a good position in the labour market. The odds of finding a job at all, on the other hand, seem to depend more on the financial and network resources of the family. This can be seen from the model estimating the risk of women's unemployment. In this model, only the mother's occupation showed a significant positive effect.

[10] Authors' estimations based on Spéder [2006].

In the case of men, out of the two significant impacts found, one was generated by (the father's) education and the other by (the father's) occupational prestige. Since the (notably) stronger effect was associated with the father's occupation (12% higher wage in 2004) we suggest that, for men, the social and financial resources of the family are more significant than cultural factors. These are only vague hypotheses at this stage. To understand the underlying mechanisms in detail, more focused research with specific proxies for the cultural, social, and even material resources of the family would be needed.

Finally, we turn to the comparison of our two proxies of employment success: the wage and social prestige of the occupation. The substantial difference in the amount of parental impact on these two proxies supports our approach of investigating more than just one aspect of social and labour market status. With SIOPS as a proxy for the quality of positions achieved, the impact of social background appears to be much more moderate, the premia for coming from a 'good' family not exceeding 4%. This is opposed to an increase of 9–12% when wages are applied. These results imply that researchers of social mobility concentrating on occupational prestige measures and not paying attention to wages can easily underestimate the importance of some potentially serious sources of social inequalities. In fact, our findings appear to be in line with the picture emerging from a non-systematic overview of the related sociological and economic literature. To us, it seems to suggest that economists (and sometimes sociologists) looking at earnings rather than other measures of occupation/social position seem are more likely to explore the direct background effect in their studies than sociologists are. Of course, a systematic meta-analysis on the relevant literature would be needed to find out whether earnings are indeed more directly influenced by social origin than social prestige.

All these comments and results depend, of course, on the population studied and the measures applied here, although our statistical models to some extent meet the requirements of robustness. We experimented with different combinations of measures for social background and various ways of dichotomising, for example, the father's SIOPS, and our key findings did not seem to be dependent on these exercises.

Conclusion

This article has shown that social background continues to affect labour market opportunities after completing higher education in contemporary Hungary. Besides studying at a university (rather than at a college) and picking the 'right' subject, coming from a 'good' family can provide further advantages when it comes to finding a good job, or (in the case of women) even to finding a job at all. Our analysis has revealed various gender-specific elements of this phenomenon. We have shown that, for women, the influence of social background appears soon

after graduation but diminishes a few years later. For men, the tendency is just the opposite: direct social impact on their labour market success only shows up some years after completing their studies. We attributed this difference to family engagements, which can significantly divert women's careers when they are in their twenties. However, based on these data, we cannot tell whether the relatively strong job-person match – as measured by the match between social origin and the position achieved – soon after graduation in the case of women is again achieved as women start stabilising their position in the labour market after giving birth.

Further contributions of this study are the parallel and fully comparable estimates of wages on the one hand and occupational prestige scores on the other. Between the two, a systematic difference in the amount of parental impact was found, with wages having a notably stronger association with the occupation or education of the parents. On the basis of this finding, we have suggested that the common use of social prestige scores in the social mobility literature could possibly contribute to sociologists somewhat neglecting the issue of direct impact of social origin.

This study is based on a survey that was not originally designed for an in-depth exploration of the social process of status-transmission. Consequently, not all of our research questions could satisfactorily be answered here. It would be a major improvement to this analysis if we had a reliable estimate of ability to allow us to control for potential ability bias. Also, a better targeted survey would ideally include a carefully selected range of questions to assess cultural, social, and financial resources available in the parental house. Methods of job search and direct parental assistance at the stage of labour market entry should also be explored to provide better insight into the actual process of social inheritance.

An in-depth understanding of the underlying factors is necessary, not only for the sake of academic understanding, but also for developing efficient policy measures. At this stage already, one important message does stand out for everyone interested in social equality. By showing that social reproduction is taking place not only inside but also outside the education system, we can conclude that working towards equal opportunities within the education system, and even achieving a generally high rate of higher education attainment, may not in itself be sufficient to secure equal opportunities in the labour market.

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